

Keynote speaker WSCG 2014

Tino Weinkauf: Flow maps - Benefits, Problems, Future Research

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Abstract

The flow map has become a standard tool for the analysis and visualization of unsteady flows. In simple terms, it maps the start point of a particle integration to its end point. Flow maps are used to compute Finite Time Lyapunov Exponents (FTLE), Streak Line Vector Fields, or to speed up other methods in flow visualization. However, they are very costly in terms of both computation time and storage.

In this talk, I will give an overview of the latest developments in flow visualization, review the theoretical and practical benefits of flow maps, discuss issues of accuracy and complexity, and pose open questions for future research in this area.

